

ABSTRACT

Disclosed is a solid titanium catalyst component which is obtained by a process comprising the steps of bringing (a) a liquid magnesium compound into contact with (b) a liquid titanium compound in the presence of (c) an organosilicon compound having no active hydrogen in an amount of 0.25 to 0.35 mol based on 1 mol of the magnesium compound (a), elevating the temperature of the resulting contact product to a temperature of 105 to 115 °C and maintaining the contact product at this temperature. The contact product may be further brought into contact with not more than 0.5 mol of the organosilicon compound having no active hydrogen (c). Also disclosed are an ethylene polymerization catalyst formed from the solid titanium catalyst component and an organometallic compound and an ethylene polymerization process using the catalyst. By the use of the solid titanium catalyst component, ethylene can be polymerized with high activities and an ethylene polymer having excellent particle properties can be prepared.